

What is claimed is:

1. A method of providing a fusing trace arrangement on a printed circuit board, the method including the steps of:
 - providing, on a printed circuit board, at least a first and a second printed circuit board fuse trace placed in parallel with each other in a main current carrying path,
 - ensuring that in a normal operating condition, 1) all of the traces carry a portion of a load current and 2) the traces are configured to prevent opening thereof, and
 - ensuring that when a fault condition occurs, the first trace opens before a resistance thereof increases so as to divert more of a load current to the second trace, thereby causing the second trace to open after opening of the first trace.
2. The method of claim 1, wherein the first trace has a width less than the second trace.
3. The method of claim 1, wherein the traces are constructed and arranged such that the first trace has a resistance higher than the second trace.
4. The method of claim 1, wherein a length of the first trace is the same as a length of the second trace.
5. The method of claim 1, wherein a length of the first trace is greater than a length of the second trace.
6. The method of claim 2, wherein a length of the first trace is greater than a length of the second trace.
7. The method of claim 1, wherein the traces are arranged in parallel with each other.

8. A method of providing a fusing trace arrangement on a printed circuit board, the method including the steps of:
 - providing, on a printed circuit board, a first group of traces and a second group of traces, each group of traces having at least first and second printed circuit board fuse traces arranged in parallel, the first group of traces being in parallel with the second group of traces in a main current carrying path,
 - ensuring that in a normal operating condition, 1) all of the traces carry a portion of a load current and 2) the traces are configured to prevent opening thereof, and
 - ensuring that when a fault condition occurs, the first trace of each group of traces opens before a resistance thereof increases so as to divert more of a load current to remaining traces of the associated group, thereby causing the remaining traces of the associated group to open sequentially.
9. The method of claim 8, wherein the first trace of each group has a width less than the second trace of the associated group.
10. The method of claim 8, wherein the traces each group are constructed and arranged such that the first trace has a resistance higher than the second trace.
11. The method of claim 8, wherein the traces of each group are constructed and arranged such that traces having a resistance higher than other traces of the group open prior to the other traces.
12. The method of claim 8, wherein a length of the first trace is the same as a length of the second trace.
13. The method of claim 8, wherein a length of the first trace is greater than a length of the second trace.

14. The method of claim 9, wherein a length of the first trace is greater than a length of the second trace.
15. A fusing trace arrangement on a printed circuit board, the arrangement comprising:
 - a circuit board, and
 - a first group and a second group of fuse traces, the first and second groups being placed in parallel with each other in a main current carrying path on the circuit board,
 - wherein, each of the first and second groups includes at least first and second traces arranged in parallel and, in a normal operating condition, 1) all of the traces are constructed and arranged to carry a portion of a load current and 2) the traces are configured to prevent opening thereof, and
 - wherein, when a fault condition occurs, the first trace of each group is constructed and arranged to open before a resistance thereof increases so as to divert more of the load current to the remaining traces of the associated group, thereby causing the remaining traces of the associated group to open sequentially.
16. The arrangement of claim 15, wherein the first trace of each group has a width less than the second trace of the associated group.
17. The arrangement of claim 15, wherein at least one trace of each group has a serpentine configuration.
18. The arrangement of claim 15, wherein the traces each group are constructed and arranged such that the first trace has a resistance higher than the second trace.
19. The arrangement of claim 15, wherein the traces of each group are constructed and arranged such that traces having a resistance higher than other traces of the group open prior to the other traces.

20. The arrangement of claim 15, wherein a length of the first trace is the same as a length of the second trace.
21. The arrangement of claim 15, wherein a length of the first trace is greater than a length of the second trace.
22. The arrangement of claim 16, wherein a length of the first trace is greater than a length of the second trace.
23. The arrangement of claim 15, wherein at least one trace of each group is a solid trace with holes there through.